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Historical Note

The Anatomy Museum at The Queen's University of Belfast

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The one hundredth anniversary of the British Museums Association, the association of museum curators, took place in 1989, and was designated Museums Year. Throughout the country museums mounted special exhibitions to publicise their role. As I am the current curator now is a good time to give a brief overview of the history of the anatomy museum at Queen's and to assess its role now and in the future.

Until relatively recently the anatomy museum was part of the medical museum and therefore could be said to have originated when a museum room was formally established alongside the dissection room in 1835.[1] This was associated with the formation of the Belfast Medical School in the Collegiate Department of the Belfast Academical Institution, which in 1831 had become the Royal Belfast Academical Institution. Anatomy and physiology had been taught previously in the Institution from 1819 when James Lawson Drummond was appointed to the chair.[2] In 1849, after the retirement of James Drummond and the formation of Queen's College, within which the medical school formed a faculty, Hugh Carlile was appointed to the chair and with him came the entire contents, purchased for £500, of the medical museum of the Park Street School of Medicine in Dublin. This greatly increased the collection, commenced by Drummond, which was then temporarily housed in the general College museum located in the north wing of the original main building of Queen's College.

In 1863 the first medical building was completed on the east side of the quadrangle of Queen's College, providing a new dissecting room with a lecture theatre attached (Fig 1). Then in 1866 the second and larger section containing the museum room was completed, allowing the museum to move to this permanent home. There was still only a medical museum, part of which comprised the anatomical collection. In 1910 the museum roof, having been found to be in a dangerous condition, was supported by steel pillars. At the same time it was observed that the floor of the museum was a fire risk, being situated over the heating furnaces for the building.[3] Between 1911 – 13 the floor of the museum was fireproofed and a new extension to the building to house the anatomy collection was added — the Bone Room with a small lecture theatre beneath, later used for biochemistry. This occurred during the curatorship of Professor Johnson Symington, which was the heyday for the museum. It also appears to have been the norm that the head of the anatomy department was

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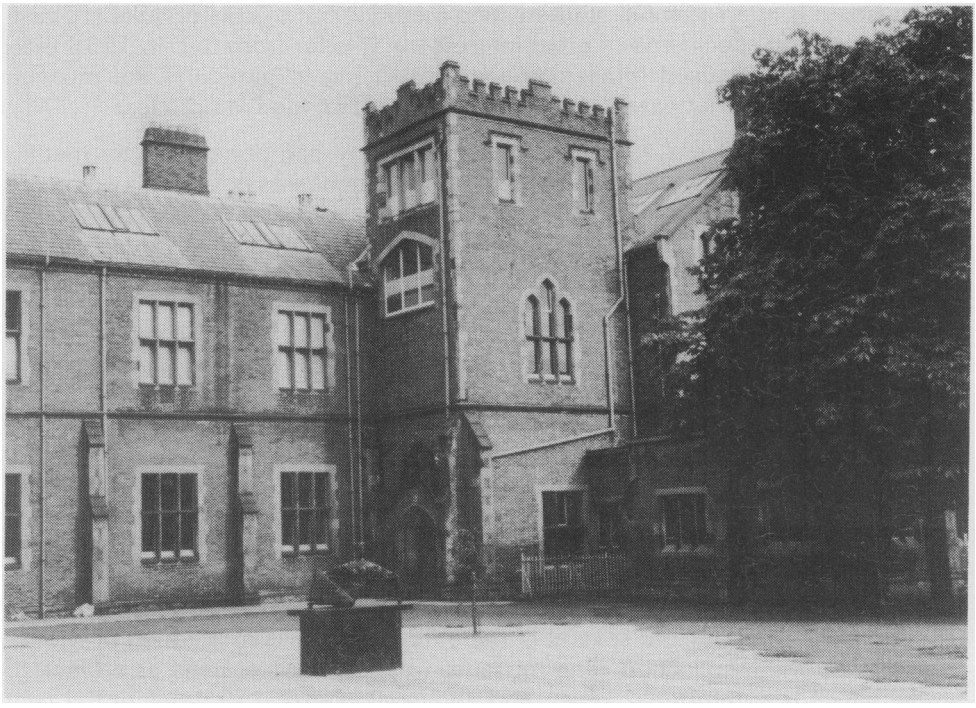

Fig 1. The original section of the medical buildings comprising the main door in the tower with the dissection room on the first floor to the left. *Reproduced with permission of Mr G Bryan.*

curator of the medical museum. This remained the custom until the pathological component was moved from the original museum room to new premises on the Royal Victoria Hospital site in 1933. The original museum room was then used for physiology lectures. The anatomy collection continued, housed mainly in the Bone Room, until it moved in 1969 to its present premises in the Medical Biology Centre.

The Medical Museum was one of four museums within the University at the turn of the century, the others being museums of Materia Medica, of Sanitary Science and of Classical Archaeology. All museums at this time provided regular summaries of recent activity for the Vice-Chancellor's annual report, but this stopped in the academic year 1924–25. In 1910 the Vice-Chancellor's report stated that the medical museum housed "collections of exceptional value and rarity", and in 1912–13 they were described as a "very valuable collection of specimens". It would appear that in its heyday there was also a large anthropological collection, to which in 1914 was added a "number of valuable specimens consisting principally of native Australian skulls and teeth ... Tasmanian skulls ... three well-preserved skulls belonging to the tribes inhabiting Northern Nigeria". Then in 1918–19 a Miss Bamford presented an Egyptian mummy, the embalmed body of a young female. In 1921–22 Dr R H Hunter made a large addition to the collection exhibiting ossification of the human skeleton. In 1924–25 there is a report of a benefaction:- "the University has to thank the Belfast Natural History Society for the permanent loan to the Medical Museums of a series of about 100 casts of an anthropometric interest". From these reports one would imagine that

the museum is at present full of interesting material, but this is not quite the case. There are many specimens of great interest but it is far from full. In 1938 there was a fire which caused much damage, destroying in particular the museum catalogues but to what extent the collection was damaged is not clear.

On its current site from 1968–1985 the anatomy component of the medical museum along with a few stray pathological specimens was housed in two rooms, the main teaching museum being on the first floor with open access for medical and dental students. This room housed specimens which illustrated normal osteology, human development and wet specimens preserved in bottles. The comparative, anthropological and archaeological collections were housed in a small room on the seventh floor with access for staff and research students only. In 1986, with reorganisation of space within the anatomy department, this latter collection was moved down to rooms adjoining the main museum, but still with restricted access. Over the past two years the museum contents have been sorted and a catalogue is in process of being prepared to replace the one lost in the fire. The current collection is divided into three main sections: comparative anatomy, embryological anatomy and gross anatomy. Each section includes osteological material alongside specimens preserved in jars, and to varying degrees histological material. The embryological section is greatly enhanced by a large collection of microscope slides, mainly produced by the late Dr W R M Morton. The Egyptian mummy and several of the other specimens mentioned previously are still within the collection. The museum was, and still is, used as a place for study, which is comfortable, quiet, and above all, warm at all times of the year.

What is the future for the Anatomy Museum? Within the Medical Biology Centre, with restructuring of departments in the university and a shortage of accommodation locally, its continued existence appeared to be doubtful. However, over the next decade it has been secured as a study area for undergraduate students and has been enlarged to double the seating capacity for at least 100 students. Accommodation now is in three rooms. The first is an osteological room, in which students will be able to study the development of bone along with all the normal osteology that is still expected of medical students. Within this room one wall will house the portraits of the past professors and a semi-permanent display illustrating their work, and the study of anatomy in Belfast. The second room is dedicated to displaying X-rays with at least forty-eight square feet of illuminated screens: these displays will be semi-permanent, relating to the current teaching programme. The main museum room will house various specimens in jars and models, all displayed to greater advantage than was previously possible. There will be several special cases to display the unusual and more interesting specimens from the reserve collection. It is proposed that an interactive video/computer system will be housed within this museum room (after the video packages have been developed). This new system will allow students to study anatomical specimens recorded on video tape through a programme running on a computer. The computer provides the options of either a tutorial study programme or a testing programme which will match the current teaching programme, both of which are tailored to each student, depending on his/her level of knowledge. The museum therefore will eventually be a place for private study, display of unique historical material, and will provide an interactive environment between students and the display material.

Fig 2. Detail from the lifesize portrait of Peter Redfern, Professor of Anatomy 1860–1893, painted by Ernest E Taylor (1863–1907).

In building towards this vision of the museum, the new catalogue is the first phase and is nearing completion. The second phase of restoration has already commenced with cleaning and restoration of the lifesized portrait of Peter Redfern (Fig 2), painted by Ernest E Taylor in 1894. It has been suggested that the portrait contains a second portrait in the mirror of the microscope, possibly of the artist. Close inspection does not indicate so and the painter has attempted to record the reflections of the instrument itself. This was an important beginning, as Peter Redfern was perhaps one of the earliest teachers of histology in these islands and as professor saw the number of medical students increase to a peak of 364 in 1881. It is therefore appropriate that we are able to study more clearly the detail of the microscope and the drawing draped over the table in the background. Is the drawing an early illustration of cardiac muscle, or what type of tissue does it represent? The drawing is in a style similar to that of other paintings within the museum collection. This was the first portrait to be restored and though expensive it has been rewarding. This year restoration of the portrait of Hugh Carlile has followed. The museum houses a very large collection of anatomical paintings, all in watercolour, which vary considerably in detail and quality. All have one common factor, the need for cleaning, paper restoration and conservation. Perhaps of greatest interest are the three-times-life-size paintings of transverse sections of Man 50, various sections of Man 24, Girl 18 and others produced during the time of Symington. Many paintings show evidence of smoke damage and perhaps some were lost in the fire of 1938. The paintings were used to illustrate points during teaching, thus avoiding the need to use the lantern lamp, and so perhaps will be fondly remembered by old graduates of Queen's. The oldest paintings, including a set of four paintings of the perineum, are signed by Hugh Carlile and dated October 1853. They are outstanding in quality and clarity, and the colours are as new. There is no indication, though, that Hugh Carlile was the painter and his signature could simply indicate that on this date he accepted the paintings into the department. They are in urgent need of paper conservation and cleaning before they can be displayed. Within this part of the collection also are the proof prints of the famous cross-sections of Man 50 published by Professor Symington in 1917. In association with these is the wooden reconstruction of Man 50, sadly lacking the thorax but of great value as a teaching aid as well as being an excellent example of hot wire work.

Many of the bottled specimens require attention to the topping up of fluid and resealing. New key diagrams are needed to explain the structures demonstrated

in each specimen. Renewal of the museum will take time due to the expense of conservation and restoration, and the shortage of skilled technicians and illustrators. It is fortunate that the Egyptian mummy (Fig 3) has survived the passage of years in excellent condition; it was recently examined with staff from the Ulster Museum conservation department.[4] X-rays were carried out and the examination confirmed that the mummy was a female, 5 to 6 years old at the time of death. The full mummification rites had been performed using the oral route through the basilar portion of the occipital bone to remove the brain, and evisceration of the body cavity through an incision of the left flank. Linen was used to pack the body cavity and only remains in the thorax. Within the linen there is a shadow, possibly the heart, which was normally left *in situ*. An unusual finding was the total removal of psoas major from both sides of the lumbar spine. The left innominate bone had been disarticulated at the sacroiliac joint and the pubic symphysis. This occurred during life and was associated with the swelling seen in the left thigh. These changes are not normally associated with artifacts produced by the mummification process. This gives a possible primary cause of death, pelvic fracture, there being no other signs of chronic illness as would be indicated by the presence of Harris lines within the bones. Recently sponsorship has been obtained which will allow the mummy to be displayed alongside the X-rays within the main museum in a secure environmentally controlled display case.

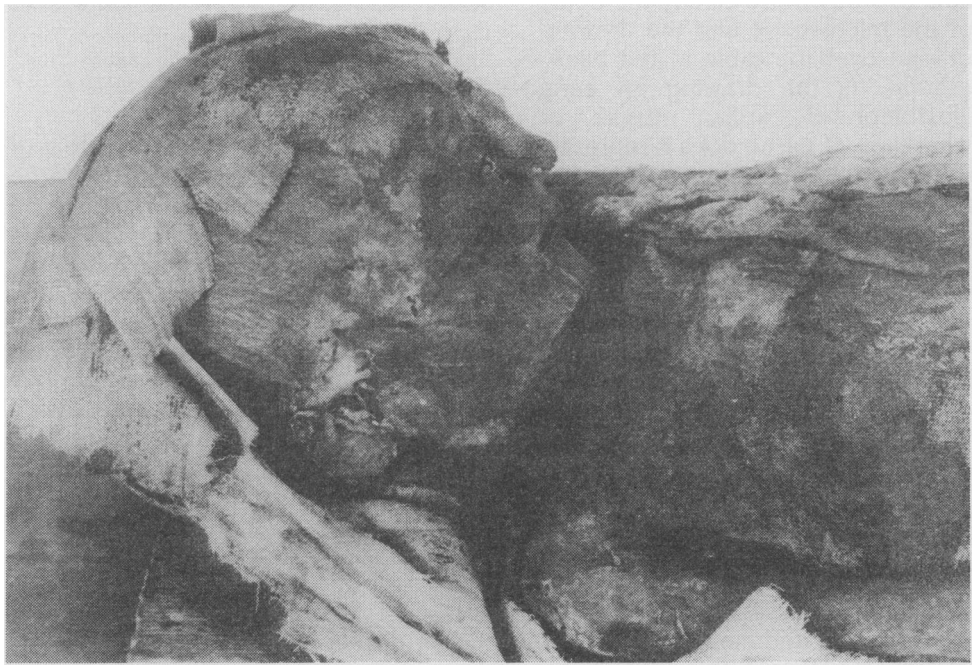

Fig 3. The mummy of an Egyptian child, presented to the medical museum by Miss Bamford, 1918.

Unfortunately, due to the change in the undergraduate course and the reduced time to study human anatomy compared to earlier days, there is no longer the opportunity for students to study comparative anatomy. This part of the collection will be housed separately in a store and made available on request.

The role of an anatomy museum in a modern department was aired recently at the Anatomical Society of Great Britain and Ireland, anatomists being asked if the anatomy museum was "dead or alive".[5] From this meeting contacts are being formed with curators of other anatomy museums to facilitate the exchange of experience in various conservation problems. Museums are traditionally places of conservation, storage, and display of any item of interest: in more recent times they have placed the role of education more highly in their activities. It is not sufficient today for a museum to place objects on a shelf to be admired and preserved for posterity; it must educate as well. Conservation is expensive and must be justified, generally by the rarity of an item globally, and more specifically, within the collection of which it forms a part.

With these points in mind, I wish to develop the role of the Anatomy Museum in Belfast along the following lines: to educate undergraduate students not only in normal anatomy but also in the history of the department and medical school to which they belong; to provide a resource for research workers, both local and national; and to offer space to any material that is of interest to students of anatomy or the history of the medical school in Belfast. There will be no strict interpretation of the term anatomy. The museum will have sections covering the main aspects of anatomy within the current curriculum, with special areas displaying various aspects of the history of Queen's in pictures, specimens and equipment. An old electron microscope from the Physiology department has already been obtained, which will be the central exhibit in the display charting the development of histology. This will demonstrate equipment used locally from the time of Peter Redfern, the Cambridge rocker microtomes of 1890 and 1894, through to more modern microtomes, displayed with microscopes used in the department up to recent times. For this revitalisation I need to collate information on the history of the museum and I would be grateful for any photographs of the old medical museums or their contents, or recollections that may help in the identification of those specimens which sadly have become separated from their labels.

In summary, it is my intention that the anatomy museum will continue to be a place of private study for Queen's students. It will allow access to all specimens of interest, displayed to the best educational advantage. The atmosphere I hope will at the same time immerse the student in the history, not only of anatomy, but also of medicine at Queen's University.

I wish to thank Dr George Cowie for his invaluable assistance in researching old University records, and all authors who have researched the history of Queen's, in particular Sir Peter Froggatt for his very useful papers on the history of the medical school.

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